

the world, consulted experts from the Air Force computer and communications communities at a variety of locations, and reviewed the experience of other DoD agencies. Two surveys were designed and fielded. The results from more than 1600 respondents were tabulated, reviewed, and analyzed.

4. This report contains the results of the Commission's work and the Commission's best judgment concerning the appropriate future role for the Legal Information Services Directorate in addressing The Judge Advocate General's Department information technology needs.

METHODOLOGY

1. **SITE VISITS AND WORKING SESSIONS.** The Commission conducted a number of site visits to evaluate the appropriate role, if any, for a Legal Information Services Directorate in the future. These visits involved briefings, interviews, and wide ranging discussions of information technology issues. The site visits and other Commission activities, in summary, follow:

a. 19-20 September 1991. The Commission met at Lowry AFB, Denver, Colorado, where the Legal Information Services Directorate has been located since its inception. We received briefings from members of the JAS staff on the mission, the JAS operation, projects, and problems. At a Director's call, the Commission Chairman explained its charter to the entire JAS staff and solicited individual inputs and suggestions. The Commission members explained they were approaching this project without preconceived recommendations and intended to conduct a detailed review of every aspect of JAS.

b. 10 October 1991. Col Moorman attended a meeting of the DOD Legal Technology Council at Lowry AFB. Composed of attorneys and technical specialists from throughout the DoD legal services community, the Council's goals are to: enhance the current technology base throughout the DoD legal services community, recommend solutions to current barriers (policy, technical or fiscal) that prevent or delay technological growth and integration, and institute a network of technology management and support personnel to facilitate the dissemination of information relating to advanced technology development and implementation. Briefings were presented on the current status of the Defense Emergency Authorities Retrieval and Analysis System (DEARAS), the movement of the Air Force toward open architecture computer systems, and current developments at JAS. Other service representatives praised what they had seen of the AFCIMS program. JAGMAIL and other DOD electronic mail systems were discussed. Col Moorman addressed the Council on the work of the Commission.

c. Captain Fillman visited a large Washington, DC, law firm which has a very active computer support division and a strong commitment to computer use within the firm. The Commission members learned that computer use in the firm began on a small scale with only those lawyers who wanted computers. Now everyone from the senior partners to the newest arrivals is using computers. In fact, computer literacy in firms is becoming an issue during recruitment and interview of prospective new members of the firm. The firm has a standard set of software, but allows individual members to use any compatible software. The firm evaluates these individual software products for possible inclusion in the firm-approved group of software products. The computer support

division provides about 20 full-time computer specialists to support the firm's computer needs. There are 200 lawyers and 90 paralegals in the firm's three offices (Washington DC, London, and Brussels) with the great majority being in Washington.

d. During the course of developing AMJAMS II, Lt Col Murdock visited a software development laboratory at Wright-Patterson AFB repeatedly. The development laboratory makes exclusive use of rapid software development techniques and is able to compress significantly the usual time required for software development. Features of this technique include using automated software development tools; reusing modules of programs which have met similar needs in the past; meeting frequently, but not constantly, with the user; and the team being given design freedom by its supervisors. These measures have combined to accelerate development of the follow-on to AMJAMS greatly.

e. 15-16 October 1991. The Commission met at Gunter AFB, Alabama, to visit the Air Force Standard Systems Center (SSC). The Standard Systems Center is the outgrowth of consolidation of a number of centers of expertise in telecommunications and information systems within the Air Force. Its mission is to provide specified standard information systems and telecommunications services to its customers. The SSC, with its subordinate units, designs, develops, acquires, produces, maintains, and manages for their lifecycles, computer systems for the Air Force, Department of Defense, and other Federal Agencies worldwide. In this role, the Center supports all major commands and bases around the world. JAS has had an ongoing relationship with SSC and its predecessor organizations on issues, including centralized procurement of hardware and software products, provision of mainframe support for FLITE, software development, and telecommunications. Several members of the Commission met with the commander, Brigadier General Frederick A. Zehrer III, to discuss issues concerning SSC support. We also received briefings from SSC staff on the Center's mission, the use of standardized software development techniques, the Air Force's software modernization efforts, the Defense Message System, the Defense Data Network (DDN), and USAF Consolidation of Standard Base Level Computer Operations under Defense Management Review Directive (DMRD) 924.

f. 31 October-1 November 1991. The Commission met in Washington, DC, and visited three DOD offices performing functions similar to some of those performed by JAS.

(1) The Commission visited the office of Mr Roy Carryer, DOD/GC Information Systems Manager, the Pentagon, for an orientation on the system utilized by DOD/GC. He demonstrated the system used by that organization, a SUN workstation based system using a UNIX operating system and fiber optic connections.

The cost per workstation is approximately \$20,000. The annual ADP budget for DOD/GC is approximately \$3 million to support a staff of 200 people.

(2) We visited the Department of the Navy JAG ADP operation located in the Hoffman Building in Alexandria, VA. There we received briefings concerning Navy JAG hardware and software which had been fielded, the Navy training program, and future developments. Each person within the Navy Legal Services Command now has a computer, approximately 1410 personal computers (PCs). Field offices are currently short of the goal of one computer per person by 1000 machines. A major software development effort for an automated appellate military justice tracking system is underway. The Navy is using a combination of contract consultant and fee-for-service Navy software development technicians and JAG Department personnel to develop the program.

(3) Finally, we visited the Army JAG Information Technology Office at Ft Belvoir. The Army achieved its goal of a computer for each person in the JAG Department in 1988. In 1986 the Army adopted Enable as the standard integrated software package for the JAG Department. That decision has now been revisited and Word Perfect 5.1 will become the new word processing standard. The Army has published Army regulations on CD ROM disks, and the Army JAG is exploring this technology with a view toward creating a deployment kit of materials on CD ROM. Army JAG has projected a need for \$16 million in the FY 93-94 timeframe to upgrade its hardware and software.

g. 20-22 November 1991. The Commission again convened at Lowry AFB to pose questions to members of the JAS staff and explore information it had developed during the visits to other sites. JAS work on the Air Force Claims Information Management System (AFCIMS) was reviewed at length.

h. 2-4 March 1992. The Commission reconvened at Lowry AFB. Results of the first Commission survey were reviewed, tabulated and analyzed. Commission members reported on site visits and data gathering efforts. The history of the separate development of FLITE and JURIS (a research system similar to FLITE, managed by the Department of Justice) was reviewed with the JAS staff.

i. 13-17 April 1992. Col Moorman visited the Army JAG School in connection with other course attendance. The Army computer instruction laboratory operation was reviewed. The Army bulletin board system and its use were also reviewed.

j. 20-24 April 1992. The Commission again convened at Lowry AFB to review and refine its draft report. During this session, additional areas for analysis were identified and further research was directed. FLITE issues were discussed.

k. 25-28 August 1992. The Commission convened at Bolling AFB to refine its report. Considerable further examination of FLITE was conducted.

2. SURVEYS.

a. The Commission developed and fielded two separate surveys. The first survey related only to computer assisted legal research (CALR). This survey was distributed on 19 November 1991 and consisted of 50 questions designed to measure the manner in which the various CALR tools are being used by members of The Judge Advocate General's Department. This survey was distributed to supervisory judge advocates at every level within the Air Force. It was distributed to every division within the AFLSA and HQ USAF, to each major buying command (AFLC and AFSC at that time) installation, and to one-half of all the other base-level legal offices. At the time of distribution, the Commission estimated the total possible response would be about 850. The Commission actually received 785 responses (92%), an exceptionally high rate of return.

b. The Commission's second survey was designed to gather information on a wide variety of computer-related topics, including some information on CALR. The survey consisted of 111 questions related to use of hardware and software in legal offices throughout the Air Force. We also attempted to elicit information concerning the general level of computer literacy and adequacy of computer-related training within the Department. This questionnaire was distributed on 11 February 1992 to supervisory judge advocates at every level of the Air Force, requesting their support in having their subordinates complete copies of the survey. Once again the survey was sent to every division within the AFLSA and HQ USAF, to each AFLC and AFSC installation, and to the one-half of all other base-level legal offices which had not been asked to respond to the first survey. The Commission estimated that the total possible responses to this survey would be about 950. The Commission actually received 815 responses (86%), once again a very high rate of return.

c. These surveys provided useful statistical data as well as extremely helpful anecdotal comments. The statistical summaries of the survey results are attached to this report (Atch 2 and 3).

3. **DOCUMENT REVIEW.** The Commission reviewed a wide variety of written materials.

a. **1982 BLUE RIBBON PANEL REPORT.** We began the review with the Final Report of The Judge Advocate General's 1982 Blue Ribbon Panel on Data Automation, dated January 1983. This insightful report provided the Commission with a valuable historical perspective. It also reminded the members of the Commission how far we have come in the last nine years. Among the Blue Ribbon Panel's recommendations in 1983 were the following:

(1) Day-to-day performance of the Department could be significantly enhanced by: providing interactive access to computer-assisted legal research; and installing multi-station, multi-function, communicating, word processing equipment in those offices with three or more attorneys.

(2) Acquisition of sophisticated word processing equipment centrally for the Department; upgrade FLITE; improve communications; and improve our CAMP and AMJAMS management systems.

(3) TJAG task FLITE (now JAS) to be the Department's focal point for all ADP, word processing and data communications requirements.

(4) TJAG open the Project Office for the Department word processing systems at FLITE (now JAS) to be staffed from transferred resources.

b. Finally, the Blue Ribbon Panel Report formed the basis for one of the Commission's ground rules for analysis: that technology will likely outstrip our imaginations. As a result, the Commission has attempted, to the extent possible, to discuss where we feel the Department should be headed without attempting to suggest the specific technologies which will get us there in each case. In other words, it appears to the Commission that in light of the rapid pace of technology change in the information systems arena, it is best to select a final destination and let developing technology supply the appropriate mode of transportation and route to get us there.

c. **OTHER DOCUMENTS.** The Commission has also reviewed the following significant documents which are retained as Appendices to the original Commission Report.

(1) Results of March 1991 FLITE survey (Appendix 1)

(2) Compilation of Suggestions to TJAG, 1988 (Appendix 2)

- (3) Program Action Directive (PAD)-Relocation of AFLSA/JAS (Appendix 3)
- (4) Deputy SECDEF Memo: Implementation Plan for Corporate Information Management, 14 Jan 1991 (Appendix 4)
- (5) DESERT SHIELD/DESERT STORM after-action report for JA (Appendix 5)
- (6) Memorandum of Understanding Between the US Army Corps of Engineers and AF Legal Information Services (Appendix 6)
- (7) AFR 110-16, Legal Information Services - DOD Directive 5160.64, FLITE and DEARAS, 9 July 1991 (Appendix 7)
- (8) DOD/GC Department of Defense Legal Technology Council Charter (Appendix 8)
- (9) DOD Corporate Information Management Report to Congress, Apr 1991 (Appendix 9)
- (10) Proposed Department ADP Training Plan, 5 Dec 1988 (Appendix 10)
- (11) TIG Report: Office Automation Training, PN 90-623, 20 Sep 91 (Appendix 11)
- (12) Memorandum of Understanding Among Service Judge Advocates General, Dec 91 (Appendix 12)

MAJOR ISSUES

1. The charter of this Commission was extremely broad. Soon after the Commission began its work, it was apparent that the study would need to be broken into several major issue areas.

2. The first of these was the proposed move of JAS from Lowry AFB, Colorado, to a joint location with the JAG School in its new building at Maxwell AFB, Alabama. We considered this first because there were many long-lead items associated with the move, such as temporary office space, billeting, and a multitude of personnel actions. Although the move was not scheduled to be completed until May 1993, if any changes were to be recommended by the Commission, it was obvious they had to be made as soon as possible. Another important consideration was that Lowry AFB was scheduled to close in 1994, and JAS, if it continued to exist, would need to be relocated somewhere by that time. After an expedited review of all the issues involved, which are discussed in greater detail later in the report, the Commission decided to recommend completion of the move from Lowry AFB to Maxwell AFB. This recommendation was forwarded to The Judge Advocate General the Commission's interim report on 2 January 1992.

3. One of the most difficult issues for the Commission was in the area of hardware and software standardization and the appropriate role for JAS in establishing policies to deal with such issues. Options, and opinions of Commission members, ranged from a policy of no control over hardware or software configuration to strict control of both hardware and software. With the prospect of a future growth in base-wide local area networks (LANs), local software standards, and local hardware and software purchases, the future role of JAS in this area needed to be carefully evaluated.

4. An essential feature of the JAS mission since it expanded after the Blue Ribbon Panel's report has been to provide a center of expertise and oversight for central procurement of automatic data processing equipment for the Department. But, not all procurement decisions have been popular in the field. JAS' continued role in this area required a critical review.

5. Since it was established, JAS and its predecessor office have found a need to develop software to enhance their own productivity and that of other JAG offices. Initially, JAS developed software because no software existed to perform the functions the Department needed. This was demonstrated in the establishment and growth of the central and on-line FLITE system, and in tailoring the JAGMAIL system to meet Department needs. Later, JAS took on the task of developing major program software

such as replacements for CAMP and AMJAMS. By developing this software at JAS, it was thought the Department could avoid sending functional advisors outside the Department, and could capitalize on the skills already resident at JAS to run and develop existing programs like FLITE. These development programs have not always gone smoothly, and the products have been received by the field with mixed reviews. Thus, software development became a separate major interest area.

6. JAS currently has not been tasked to discharge any formal training mission. The Commission discovered, as a result of reviewing the field surveys and the members' own experiences, adequate training of Department personnel could realize much more of the potential of the hardware and software in use throughout the Department. The need for better training was consistently raised by survey respondents and personnel we interviewed. Thus, the Commission examined the need for training and potential approaches to the provision of training within the Department.

7. An area in which the Commission members documented dissatisfaction with JAS's past performance was customer service. Many Department members felt they could be more productive on the hardware and software JAS provided. They cited a need for both better training and a reliable and readily available source of help to assist with problems in operating the equipment or software. The Commission thus reviewed many options for providing customer support.

8. As the Commission studied all the aspects of the JAS mission, it became increasingly apparent that a common problem in many Department-wide projects is the adequacy of telecommunications. Many of the programs run by JAS are designed to serve as a network connecting all JAG offices around the world. For example, JAGMAIL, FLITE, and AFCIMS are all designed to rely largely on worldwide communications for their effectiveness. Additionally, local offices and headquarters are becoming more reliant on local data communications and networks to enhance their productivity. Thus, the Commission thought it appropriate to look closely at JAS's role in addressing Departmental network and other data communications needs.

9. The central reason for the creation of JAS's predecessor, and the focus of much of the JAS budget and manpower, is the development and management of a computer assisted legal research (CALR) system. Originally, this mission so closely paralleled the total mission of the office that the organization was called LITE or FLITE (the names of the computer assisted research system which was developed). More recently, as the directorate was given more diverse responsibilities, the name changed to a more general one, Legal Information Services Directorate, but the centrality of FLITE to the operation of JAS remains. During the years since FLITE was first developed, several commercial CALR systems and JURIS have begun operation. The Commission studied many options related to providing CALR to Department members ranging from ending

the FLITE operation entirely, to expanding it to provide full FLITE operation and full commercial CALR services. This examination led the Commission to a review of legal research in general, including the worldwide library operation.

10. Finally, after analysis of the component issue areas discussed above, the Commission considered how a future JAS should be structured to meet Departmental needs.

11. In the following sections of this Report, the Commission summarizes its research, analysis, conclusions, and recommendations as to each of these issue areas.